‘Fertile’ ground for chaos: Exploring the EU’s fertiliser crisis
Russia’s invasion of Ukraine has sent the price of fertilisers skyrocketing in Europe, while sanctions on Belarus have seen the import of potash, a key input for fertilisers, grind to a halt.

This has left EU countries scrambling for alternatives while farmers struggle to cover the costs of this crucial input for food production. Furthermore, the other long-term crisis of nutrient losses in soil also looms large.

In this Special Report, EURACTIV takes a closer look at this key agricultural policy challenge, exploring what is behind this fertiliser crisis, the impact this is having across the EU agriculture sector and the measures being taken to ease this.
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Russia’s full-scale invasion of Ukraine has upended global agrifood chains. Besides causing major disruption in grain markets, the war has also sparked a global mineral fertiliser crisis, which has hit the EU hard.

Together, Russia and Belarus provide as much as 60% of the EU’s fertiliser supply, according to data from the industry association Fertilizers Europe.

Therefore, sanctions introduced in March by the EU on imports from Belarus of potash – a key fertiliser that is largely deficient in Europe – and interruptions to trade with Russia have put significant pressure on supplies.

This is because the European countries are heavily reliant on imports of fertilisers due to limited local availability of essential inputs, including natural gas as a feedstock.
and energy source for the production of nitrogen fertilisers, phosphates and potash.

Scarcity or high prices for fertilisers further compound global food security risks. While viable food production depends on more than just fertilisers, what makes the current fertiliser situation ominous is the immediate effect that fertiliser shortages can have on yields.

The United Nations has warned of a looming food crisis that could severely affect countries which often do not have the financial means to run expensive subsidy programmes for fertilisers.

This also generated some criticism of EU sanction policy for fuelling global fuel insecurity, which remains one of the main arguments of the Russian propaganda since 15% of global fertilisers' export depends on the supply from Moscow.

Contacted by EURACTIV, a Commission spokesperson rejected the Russian narrative, stressing once again that there is no ban on Russian imports of fertilisers.

"EU sanctions do not affect transport, assurance, or transit operations of any fertilisers exported from Russia to third countries either," the spokesperson continued.

According to the EU official, 80% of nitrogen and phosphorous fertilisers can be imported from Russia to the EU without any constraints, while the rest of the imports, including potash and mixtures containing potash, are allowed with a limit corresponding to the volumes of historical trade.

This limit was introduced to avoid circumvention of the potash import ban from Belarus, as these products are similar to the banned ones. The Commission also issued guidance on the 20% EU-Russia trade of potash that clarifies those activities are lawful under the sanctions regulation.

New routes

The fertiliser crisis has left countries in Europe and elsewhere scrambling for alternative suppliers but there is no obvious quick fix, although alternatives exist.

The EU has started looking towards Morocco, which already accounts for 40% of Europe's imports of phosphate and this could increase substantially in the coming months and years.

Fertilisers will also feature as a key topic of conversation at the EU-Central Asia ministerial in Uzbekistan – attended by the EU's chief diplomat Josep Borrell – in mid-November, as the country positions itself as a way to ease the EU's fertiliser woes.

Meanwhile, the lack of nitrogen-based fertilisers has also resulted in another worrying development – a significant increase in urea imports to Europe.

Compared to nitrogen-based fertilisers, urea has lower efficiency in the fields and a higher environmental footprint as it cannot be produced without the use of fossil fuels and could lead to an increase in ammonia emissions.

According to available data, imports of urea to Europe rose by almost 40% in 2022 compared to 2020, a representative from Fertilizers Europe told EURACTIV.

This trend is not only a negative development for European producers, since urea fertilisers are mainly produced outside the EU – in particular in Egypt, Algeria, and Russia – but also for “farmers and Europe’s green ambitions,” the representative added.

Energy crisis ‘collateral damage’

European production of chemical fertilisers has been hard hit by the high gas prices European countries have seen since the start of Russia's war in Ukraine.

Methane made from natural gas is indispensable for fertiliser production, as it is a key ingredient for the chemical reaction – known as the Haber-Bosch process – used to make nitrogen-based fertilisers such as ammonia.

Unlike many other industries, the fertiliser industry thus relies on gas not only to keep machinery and production running but also as an input for the product itself.

According to the industry association Fertilizers Europe, gas makes up 90% of the industry’s variable production costs, that is, the costs that are dependent on the amount that is produced.

Therefore, high gas costs can mean that the industry has to increase fertiliser prices or even reduce production. It is estimated that around 70% of the European production capacity for ammonia, a key fertiliser, was curtailed following the gas price spike.

Additional pressure on producers in the EU comes from international competition as gas prices in European countries – many of which were highly dependent on Russian gas before the start of the war – have risen much more strongly than, for instance, those in the US.

In spring this year, natural gas prices in Europe were around nine times higher than in the US,
Impact on farmers, consumers

While fertilisers remain largely available in the EU, the biggest concern is about affordability as skyrocketing energy prices render production uneconomical with prices soaring as much as 149% in September.

The current situation is also having severe knock-on effects on farmers’ purchasing and planting decisions.

For example, there are indications that EU farmers, against the backdrop of volatile markets and unusually high prices, have been delaying their purchases of fertilisers for the sowing of winter crops.

Meanwhile, purchases in volume were reported to be down by approximately 20% in summer 2022 compared to the previous year and even European fertiliser producers have not been accumulating stocks in their usual way.

EU farmers’ association COPA-COGECA has warned that the true cost of this price surge will only be revealed next spring, when their lower inventories will be tested. Meanwhile, the production of seeds is also planned to drop due to a lack of fertilisers.

Increased costs for food producers can result in high food prices – a key driver for consumer price inflation in the EU, which has hit the highest rate since the euro was introduced as the single European currency.
Commission outlines plan to bolster agrifood sector against fertiliser crisis

By Natasha Foote | euractiv.com

Languages: Deutsch

The European Commission unveiled its communication on fertilisers outlining a number of measures designed to ensure the availability and affordability of the key input amid the disruption caused by the Ukraine war.

The highly-anticipated communication, presented by the EU executive on Wednesday (9 November), comes on the back of Russia’s invasion of Ukraine, which has sent shockwaves through the EU agrifood sector and caused the price of fertilisers to skyrocket.

While the communication offers no legislative proposals, it sets out a broad game plan of short and long-term measures designed to strengthen the EU’s fertiliser industry, while simultaneously exploring ways to make EU farmers less dependent on fertilisers.

Stressing the impact of Russia’s “weaponisation” of gas, Vice-President Frans Timmermans emphasised the need to act swiftly to safeguard the sector.

“The more efficient we are and the faster we switch to alternatives for mineral fertilisers, the less we depend on fossil fuels and the more
resilient our food system will be,” he said on the back of the presentation of the communication.

Meanwhile, EU Agriculture Commissioner Janusz Wojciechowski stressed the importance of this communication for farmers, who have been hard hit by the soaring fertiliser costs.

“We cannot stand idle in the face of this situation,” he stressed, adding that a viable production of fertilisers in the EU is a “key requisite for our strategic autonomy and our continued contribution to global food security”.

What’s new?

Concretely, the communication announces the launch of two new initiatives; a new market observatory designed to improve market transparency and a new European Innovation Council challenge on resilient agriculture.

This innovation council will offer €65 million to support AgTech start-ups for the fast development of “deep-tech innovations to maintain and improve crop yield with environmentally friendly technologies,” notably in the area of fertilisation.

Both initiatives are due to be launched in 2023.

Show me the money

Besides encouraging member states to prioritise fertiliser producers in the event of gas rationing, the communication sets out a range of options to financially support affected parties.

This includes financial support generated via measures such as windfall and solidarity levies.

Meanwhile, the communication also leans heavily on state aid to offer specific support to farmers and fertiliser producers.

“There is no different option but to approve the state aid in this very difficult situation,” Commissioner Wojciechowski explained in a press conference following the presentation of the communication, stressing this is needed to support both farmers and fertiliser producers.

Farmers will be able to benefit from the Commission’s recent decision to increase the ceiling for maximum aid under the temporary crisis framework to a record €250,000.

Meanwhile, on the production side, fertiliser producers will benefit from higher aid intensities and aid amounts of up to €150 million, provided they meet the eligibility criteria.

For companies receiving larger aid amounts, the communication sets out this aid will be tied to commitments to “set a path towards reducing the carbon footprint of energy consumption and implementing energy efficiency measures”.

Public authorities will also be able to purchase fertilisers and offer them at lower prices to farmers, Commissioner Wojciechowski presented as a win-win for all involved.

“Producers will have the guarantee that they would be able to sell it and farmers would receive cheaper fertilisers,” he said, adding this could be “very effective”.

In the longer term, the communication places an emphasis on the role of the EU’s farming subsidy programme, the Common Agricultural Policy (CAP).

Via CAP national strategic plans (see below for more details), member states are expected to introduce amendments to help farmers use fertilisers more efficiently and sustainable, including facilitating access to organic fertilisers and nutrients from recycled waste streams.

International impact

In the international area, the communication also sets out commitments to cooperate with selected EU partner countries, including offering support to promote “alternatives to mineral fertilisers based on sustainable soil fertility management.

This includes a commitment to join the Global Fertilisers Challenge. Launched at the Major Economies Forum in June 2022, this challenge aims at alleviating fertiliser supply shortages through better nutrient management, increased fertiliser use efficiency, alternative farming practices and alternatives to mineral fertilisers.

The Commission will also initiate discussions on transparency improvements, including the avoidance of export restrictions on fertiliser trade in the World Trade Organisation (WTO), with the view to achieving deliverables at the next ministerial conference.
The inclusion of fertilisers in the landmark EU’s carbon border levy turned up agri-food stakeholders’ noses as they fear more costs for farmers and undermining the potential of the sector in the green transition.

Following weeks of intense negotiations under the Czech Presidency of the EU, legislators have reached breakthrough agreements on a number of key files within the Fit for 55 package, including the final elements of the Carbon Border Adjustment Mechanism (CBAM) agreement.

The agreement, which was struck on 13 December, will pave the way for Europe to set up the world’s first levy on carbon-intensive goods entering its market.

The EU’s carbon border adjustment mechanism will apply to foreign competitors unless they enforce comparable measures to lower emissions on the industries covered by the levy.

However, the final deal has been lambasted by EU agrifood stakeholders, who reserved criticism for the decision to include fertilisers.
“This inclusion will make the price skyrocket further, increasing the cost of agricultural production in Europe, whilst making the use of imported food more competitive and attractive,” a statement from the EU farmers’ association COPA-COGECA reads.

For the association, this ‘double penalty’ for farmers would be ‘unbearable’, considering the current and foreseeably increasing price of fertilisers, already at a historic high thanks to Russia’s invasion of Ukraine.

The war has sparked a global mineral fertiliser crisis, which has hit the EU hard. Soaring energy costs, combined with sanctions curtailing the import of key fertiliser inputs from Belarus, have seen the price of fertilisers the skyrocket as much as 149% in September 2022.

Likewise, the EU fertiliser lobby Fertilizers Europe criticised the CBAM outcome, maintaining that the EU “came short in establishing a coherent decarbonisation framework fit for the future”.

The trade association reserved particular criticism for the fact that, while there is a review clause on possible export solutions in 2025-2026, no export solution was included in the final compromise.

“As green investment decisions will be made in the immediate future to meet the 2030 climate deadline, therefore an eventual review will be too late to ensure that the industry – attracted with foreign green production subsidies abroad – stays in the EU,” it warned, stressing that this approach “further aggravates the already challenging competitive position” of the sector.

As such, Fertilizers Europe warns that the final CBAM instrument will “surely eliminate EU low-carbon exports in global markets”.

**Fertiliser role in green transition**

The CBAM deal cast new light on the attempts to accelerate the decarbonisation of the agri-food sector while securing global food security.

But the Commission seems to bet on the role that fertiliser production could have in taking the lead in the transition thanks to hydrogen and particularly to green ammonia.

Ammonia, a building block of fertilisers, has been used in the production process as a way to return nitrogen to the soil. Nevertheless, its molecule contains hydrogen and nitrogen (NH3) and it breaks down, when used, to only water and nitrogen.

This gives ammonia huge potential in storing and transporting clean energy par excellence, namely hydrogen.

Today, hydrogen is mostly obtained from ammonia in a splitting process called steam methane reforming (SMR), which requires using natural gas. However, gas can be replaced by renewable electricity in the process, in what is called green ammonia.

The recently unveiled Commission’s fertilisers strategy gave support to ‘the scaling up of the production of green ammonia’ with some “key flanking actions’ to come in the following mthe oto boostnlong-haulths on that.

“We should seize the opportunity to expand production of green ammonia, produced with renewable energy,” said Commission vice-president Frans Timmermans when presenting the strategy.

**Mixed signals**

The ambitious RePowerEU plan to reduce the EU’s dependence on natural gas asked member states to increase renewable hydrogen use in Europe to 20 million tons by 2030, of which about 4 million tons as ammonia, which is considered an essential alternative to liquefied hydrogen for international trade.

With a share of 53%, the ammonia industry is today the biggest producer and user of hydrogen globally. And the fertiliser sector, in turn produces and consumes 3.1 million tonnes of hydrogen, becoming crucial in helping upscale clean energy.

A recent report drafted by the Dutch consultancy CE Delft suggests that replacing ammonia production based on natural gas in the fertiliser industry will help to attain the Dutch national targets set by the EU in the latest revision of the renewable energy directive.

For this potential, the CBAM final deal was perceived as counterintuitive by the fertiliser sector.

“EU policymakers missed an opportunity to establish a framework favourable for green investments that will match the support for industry provided by other global economies” commented Jacob Hansen, director General of Fertilizers Europe.

Hansen’s association stressed in a statement that “the Green Deal as the new growth strategy for Europe can only be considered a success story if domestic industry is part of the green transformation and its global competitiveness remains intact.”
Europe has the potential to strengthen its position during this time of crisis by continuing to spearhead the green transition and by building its strategic autonomy in food and fertilizers. As a frontrunner in decarbonizing the agri-food and energy value chains, Yara supports the European Green Deal’s transformative path to a climate-neutral and sustainable European Union. Therefore, we must not risk replacing Europe’s dependency on gas with a new dependency on imported fertilizers, impeding EU and global environmental goals – writes Mónica Andrés Enríquez.

Mónica Andrés Enríquez is Executive Vice President for Europe at Yara International

Eight months into the Russian war on Ukraine, the cruelty and suffering Russia is inflicting on the Ukrainian people also brings with it two deeply worrying developments for Europe.

Firstly, Russia’s invasion of Ukraine has exposed Europe’s energy dependency on Russia. Weaning ourselves from it is, therefore, a top priority. However, this must be done without creating new and even more dangerous dependencies, especially...
in strategic areas such as food and agriculture. We must ensure that Europe does not move towards an era where food production and food resilience are based on imported fertilizers from Russia and other geopolitically unstable regions such as the Middle East. By using gas supplies to Europe as a political weapon, Russia is at the same time helping its fertilizer industry to disrupt the competitive market and capture global market share, both inside and outside the EU, potentially increasing the regime's political influence.

Secondly, jeopardizing the low-carbon European fertilizer industry would result in a significant increase in CO₂ emissions globally. This would not be a step towards the Paris climate goals, but a step backward, because mineral fertilizers produced in Europe have a significantly lower carbon footprint (around 50-60 percent) compared to most non-EU fertilizers. Therefore, the strong increase in urea imports (up 76 percent in the last 10 years) is also worrying, colliding with the EU’s environmental efforts and increasing its reliance on a nutrient form that, compared to nitrate-based fertilizers, can’t be produced without the use of fossil fuels and thus can’t be decarbonized. We need to ensure that short-term actions do not lead to long-term effects and changes in agricultural practices that would be difficult to undo. It is imperative that the war on Ukraine does not destroy the work towards a net-zero future and does not jeopardize the European fertilizer industry, which is a frontrunner in decarbonization. That is something we cannot afford to do: our climate is already close to a tipping point.

European leaders are dealing with the worst cost-of-living crisis we have seen since the Second World War. In addition to this incredibly difficult challenge, they must at the same time ensure the long-term transition towards less geopolitical risk and a net zero future –while supporting citizens, especially farmers, as well as other stakeholders along the way.

Here are three ways we can reduce our food dependency on Russia and decarbonize food production:

1. **Reinforce strategic autonomy**
   The European fertilizer sector is crucial for food security and for building a resilient, sustainable food system, both in Europe and globally. Replacing lost European production with imports only reduces what’s available today to farmers outside Europe, which would be detrimental for the global food system. Financial support measures under the CAP or Temporary Crisis Framework to support productivity in factories and on the fields are more appropriate tools to address the crisis than lowering barriers for imports. Supply of energy and raw materials to the European fertilizer production must be secured to enable continued operations.

2. **Accelerate the green transition**
   The transition to more sustainable, efficient fertilizer production by using renewable energy and recycling nutrients requires large-scale investments. Green ammonia holds great potential to transform not only the food system, but also other sectors of the European economy.

3. **Optimize nutrient use**
   We already have many tools needed to achieve more sustainable, efficient farming practices. Now we just need to scale them up – quickly. By using best practices and solutions that exist today, European farmers can already improve nutrient use efficiency by up to 20 percent, which in turn can result in 5 to 7 percent higher yields and an up to 20 percent lower carbon footprint related to mineral fertilization. Low-carbon fertilizers, regenerative agricultural practices and digital tools for precision farming must be incentivized to help make European food production more resilient and sustainable. That includes financially supporting European farmers for implementing efficient, sustainable agricultural practices and for making every nutrient count.

Let’s make sure we don’t make the same mistake by replacing Europe’s energy dependency on Russia with a dependency on fertilizers and food. This time, much more is at stake: global food security.